What is claimed is:

1. A computer program embodied on a computer-readable medium, wherein the computer program comprises a plurality of instructions, wherein the plurality of
5   instructions are configured to:

      detect a plurality of computers that are connected by a network; and

      construct a management hierarchy for the plurality of computers, wherein one of the
10   computers is designated as a master administrative server, wherein one or
             more of the computers are designated as remote administrative servers, and
             wherein one or more of the computers are designated as thin clients, wherein
             the master administrative server is configured to manage configuration
             updates for the remote administrative servers which are configured to manage
15   configuration updates for the thin clients.

2. The computer program as recited in claim 1, wherein the master administrative server is configured to directly manage a first subset of the thin clients, and wherein the master administrative server is configured to indirectly manage a second subset of the
20   thin clients through the remote administrative servers.

3. The computer program as recited in claim 2, wherein each remote administrative server is configured to directly manage one or more thin clients from the second subset of thin clients.

25

4. The computer program as recited in claim 1, wherein the program is configured to configure the thin clients to access one or more application servers to execute applications.

5. The computer program as recited in claim 1, wherein the program is configured to configure each thin client to access one remote administrative server or the master administrative server for configuration updates.

6. The computer program as recited in claim 1, wherein the program is configured to configure each thin client to access one or more application servers to execute applications.

7. The computer program as recited in claim 6, wherein one or more of the application servers are also administrative servers.

8. The computer program as recited in claim 1, wherein the plurality of instructions are further configured to automatically update each thin client by conveying update information to the thin clients, wherein the master administrative server is configured to convey update information to at least one of the thin clients by forwarding the update information via one or more remote administrative servers.

9. The computer program as recited in claim 1, wherein the master administrative server is configured to convey update information to one or more of the thin clients by forwarding the update information via one or more remote administrative servers in response to the one or more thin clients joining the network.

10. The computer program as recited in claim 1, wherein each administrative server is configured to operate in parallel.

11. The computer program as recited in claim 1, wherein each administrative server is configured to distribute the update in parallel to the thin clients once the update is received.

12. The computer program as recited in claim 1, wherein the plurality of instructions are further configured to display at least part of a hierarchical network diagram of the

management hierarchy, wherein the diagram comprises a plurality of icons each representing one administrative server or thin client in the network.

13. The computer program as recited in claim 1, wherein the plurality of instructions are further configured to display at least part of a hierarchical network diagram of the management hierarchy, wherein the diagram comprises a plurality of icons each representing one administrative server, thin client, or cluster of administrative servers and thin clients in the network.

14. The computer program as recited in claim 1, wherein the plurality of instructions are further configured to cause at least one administrative server to allow any other administrative server requesting control to take over management of configuration updates.

15. The computer program as recited in claim 1, wherein the plurality of instructions are further configured to cause at least one administrative server to prevent another administrative server from taking over management of configuration updates.

16. The computer program as recited in claim 1, wherein the plurality of instructions are further configured to prevent at least one administrative server from relinquishing control to another administrative server in response to a request to seize control unless the request to seize control originates from a specified network address.

17. The computer program as recited in claim 1, wherein the plurality of instructions are configured to cause the administrative servers to:
receive error messages from the thin clients;
propagate the error messages up the management hierarchy; and
generate an error summary.

18. The computer program as recited in claim 1, wherein the plurality of instructions are configured to cause the administrative servers to:

receive status messages from the thin clients;

propagate the status messages up the management hierarchy; and

generate a status summary.

5 19. The computer program as recited in claim 18, wherein status summary includes only

serious error messages corresponding to each particular administrative server.

20. The computer program as recited in claim 1, wherein the plurality of instructions are

further configured to provide a graphical user interface.

10

21. A method for managing a network of computers, the method comprising:

displaying at least part of a hierarchical network diagram of the network, wherein the

diagram comprises a plurality of icons each representing one computer in the

network;

15 prompting a user to configure a first computer in the network with a default

configuration, wherein the first computer is a thin client;

allowing the user to select one or more additional computers in the network by selecting

one or more icons corresponding to the one or more additional computers,

wherein the one or more additional computers are thin clients;

20 comparing the one or more additional computers' hardware with the first computer's

hardware; and

copying the default configuration to the each of the one or more additional computers that

meet the first computer's level of hardware.

25 22. The method as recited in claim 21, further comprising allowing the user to select the

one or more additional computers by shift-clicking icons representing the one or more

additional computers.

23. The method as recited in claim 21, wherein two or more of the computers in the

30 network are administrative servers configured to manage updates for at least one or

more of the thin clients in the network, wherein the method further comprises

allowing the user to select the one or more additional thin clients by clicking icons representing one or more administrative servers in the network diagram, wherein clicking a particular administrative server selects all thin clients managed by the particular administrative server.

24. The method as recited in claim 21, further comprising allowing the user to select the one or more additional thin clients by dragging an icon representing the first thin client over one or more icons representing the one or more additional thin clients.

25. The method as recited in claim 21, further comprising allowing the user to configure one or more computers as administrative servers, wherein the administrative servers are configured to manage updates for one or more of the thin clients in the network.

26. The method as recited in claim 25, wherein at least administrative server is a master administrative server configured to manage updates for one or more other administrative servers.

27. The method as recited in claim 21, further comprising allowing the user to create one or more clusters by selecting icons representing thin clients that are cluster members.

28. The method as recited in claim 21, further comprising allowing the user to create one or more clusters by selecting icons representing administrative servers that manage thin clients that are cluster members.

29. The method as recited in claim 25, further comprising:
performing a network-wide update for all thin clients by:
downloading update information to each administrative server, and
configuring each administrative server to automatically download the update information to all thin clients managed by the administrative server.

30. The method as recited in claim 29, wherein each particular administrative server is configured to download the update information to the thin clients controlled by the particular administrative server in parallel with other administrative servers.

5   31. The method as recited in claim 25, further comprising:
    configuring a particular administrative server to prevent the particular administrative server from relinquishing control to another administrative server.

32. The method as recited in claim 25, further comprising:
10 configuring a particular administrative server to prevent the particular administrative server from relinquishing control to another administrative server that does not have a predetermined network address.

33. The method as recited in claim 25, further comprising:
15 configuring a particular administrative server to relinquish control to any other administrative server that requests control.

34. The method as recited in claim 25, further comprising:
    generating an error summary for each particular administrative server, wherein each error
20 summary includes at least the most severe fault message from each thin client and administrative server managed by the particular administrative server.

35.   The method as recited in claim 21, wherein the level of hardware includes one or more of the following attributes: amount of memory, graphics resolution, and color
25 depth.

36. A method for managing a network of thin clients and servers, wherein the method comprises:

30

designating a first server as a top-level master administrative server in a management hierarchy;

designating a second server as a remote administrative server managed by the top-level master administrative server;

specifying a first subset of thin clients that will receive configuration update information from the top-level master administrative server;

specifying a second subset of thin clients that will receive configuration update information from the remote administrative server; and

performing a thin client configuration update by:

conveying update information from the top-level master administrative server to the remote administrative server, and

conveying the update information from the top level master administrative server to the first subset of thin clients at least partially in parallel with conveying the update information from the remote administrative server to the second subset of thin clients.

37. The method as recited in claim 36, wherein the update information comprises at least one or more of the following: display resolution information, color depth information, and application server address information.

38. The method as recited in claim 36, further comprising automatically detecting new thin clients that are connected to the network and automatically providing the new thin clients with configuration information specifying the remote administrative servers' network address.

39. A computer network configured to allow hierarchical management, wherein the network comprises:

a top-level master administrative server;

one or more remote administrative servers, wherein each remote administrative server is connected to the top-level master administrative server via a network;

one or more thin clients, wherein each thin client is connected to one of the remote administrative servers or the master administrative server via the network, wherein the top-level master administrative server is configured to convey update information for one or more of the thin clients to the remote administrative servers, wherein the remote administrative servers are configured to forward the update information to the one or more thin clients.

40. The computer network as recited in claim 39, wherein the remote administrative servers are configured to forward the update information to the one or more thin clients substantially in parallel.

41. The computer network as recited in claim 39, wherein a subset of the remote administrative servers are configured to be master/remote administrative servers and to receive updates from the top-level master administrative server and forward the updates to one or more other remote administrative servers.

42. The computer network as recited in claim 39, wherein the remote administrative servers are configured in a control hierarchy, wherein the top-level master administrative server is the top or root of the control hierarchy.

43. The computer network as recited in claim 39, wherein one or more of the remote administrative servers are connect to the wherein the remote administrative servers are configured to forward the update information to the one or more thin clients substantially in parallel.

44. The computer network as recited in claim 39, wherein each remote administrative server is connected to the top-level master administrative server via a first type of network connection, wherein each thin client is connected to one of the remote

administrative servers or the master administrative server via a second type of network connection.

45. The computer network as recited in claim 39, further comprising one or more application servers connected to the thin clients, wherein the application servers are configured to store and execute applications for the thin clients.

46. The computer network as recited in claim 45, wherein one or more of the top-level master administrative server and the remote administrative servers are the one or more application servers.

47. The computer network as recited in claim 39, wherein the first type of network connection and the second type of network connections each comprise one or more of the following: Ethernet, ISDN (integrated services digital network), DSL (digital subscriber line), or telephone dial-up.

48. The computer network as recited in claim 39, wherein the first type of network connection is an Ethernet local area network (LAN) connection.

49. The computer network as recited in claim 39, wherein the first type of network connection is a dial-up connection.

50. The computer network as recited in claim 39, wherein the second type of network connection is an Ethernet local area network (LAN) connection.

51. The computer network as recited in claim 39, wherein the second type of network connection is a dial-up connection.